

GP-301875

POSITION SENSORLESS CONTROL ALGORITHM
FOR AC MACHINE

ABSTRACT OF THE DISCLOSURE

A control system for an electric motor having a stator and rotor including an inverter for providing power to the electric motor, a controller for controlling the inverter, a low speed control block to estimate the rotor angular position using stator current components operating in the controller, 5 a high speed control block to estimate the rotor angular position using stator current components and stator flux position operating in the controller, a transition switch in the controller to vary operation between the low speed control block and the high speed control block, and where the inverter is 10 controlled by six step operation.